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Impact of Pesticide Residues in Composted Lawn Waste Compost on Vegetable Crops [ABSTRACT]

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To conserve space in the Lincoln city landfill, a program for composting urban yard waste was initiated in 1992. Analysis of the first year's compost showed pesticide residues, including chlordane, DDT, DDE, and pendimethalin. We are investigating the concerns of the City Health officials regarding the risk of returning the compost to an urban environment, including use as a soil amendment for garden crops. To determine background levels of the contaminants, a survey was conducted of foundation, lawn, and garden soils of Lincoln properties. Sampling was based on the age of the house: 1 to 24, 25 to 49, 50 to 74, and 75 to 100+ years with three samples taken from each foundation, lawn, and garden. Higher residues were found in the soils of the 25 to 100+ houses than were found in the compost. No pesticide residues were found in the soil from the 1- to 24-year-old houses, with the exception of foundation samples. Chlordane (523 ppb) and heptachlor (44 ppb) were detected in these samples. Greenhouse garden crop studies showed no adverse growth of tomato, petunia, marigold, or sweet corn. Root crops are being analyzed for bioaccumulation.